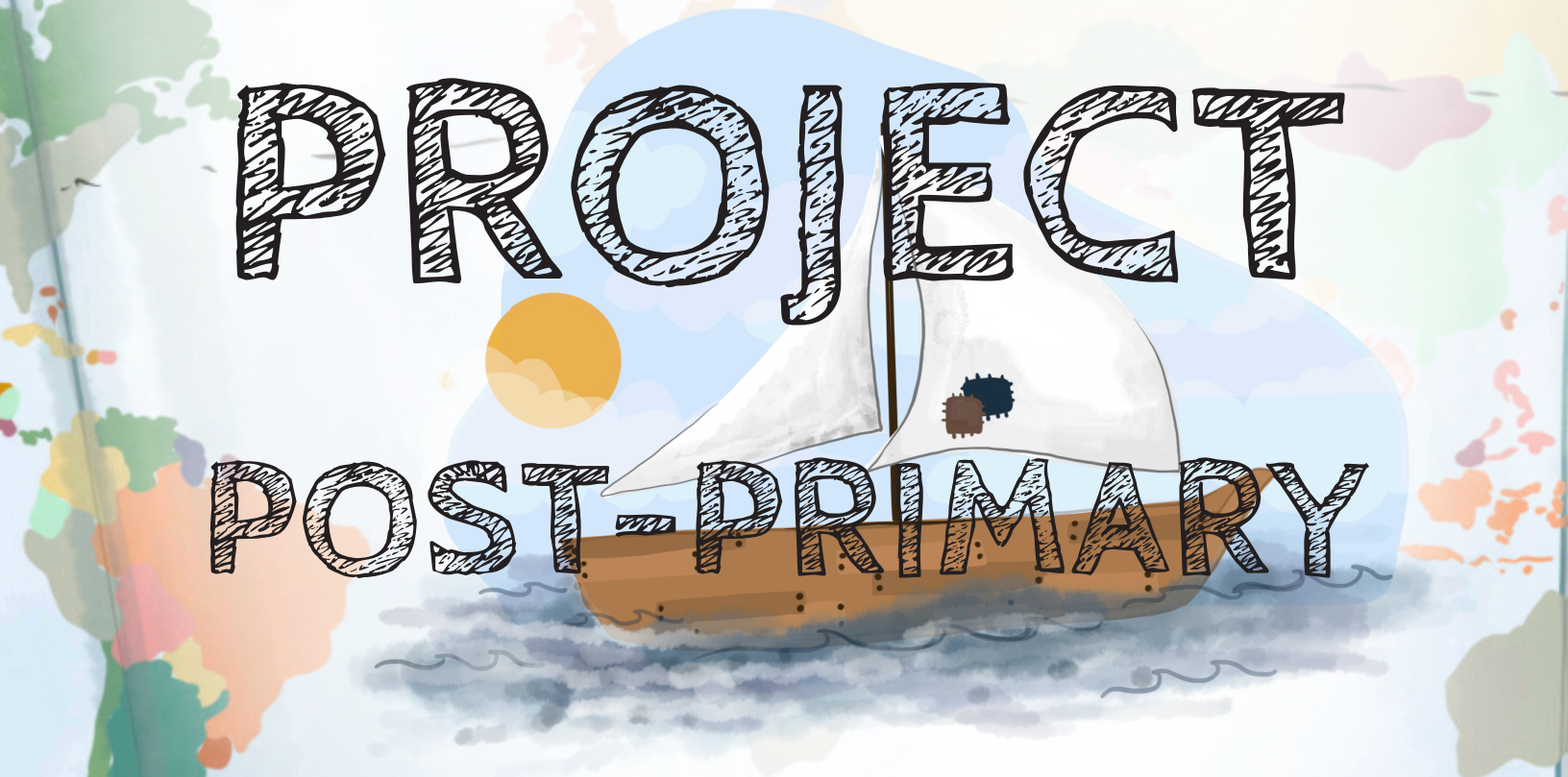
WonderHere

WORLD TRAVELER MATH PROJECT

POST-PRIMARY



World Traveler Math Project

Introduction

As you spend this unit learning about different places around the world, YOU will become a world traveler! And did you know? World travelers need to have some important math skills up their sleeves to make their travels smooth sailing! For the next six weeks, you will be preparing for your big trip by reading maps, understanding the distances you are traveling, budget for your trip, pack an imaginary bag, and so much more! Math is everywhere. Let's use it to take a TRIP!

TASK 1: Map Out Your Journey!

Select one of the plane tickets to decide where you would like to go! Plot your current location and your destination. Draw a straight line between your two points to track your distance

BOARDING PASS
PASSENGER NAME
FROM Orlando, FL
TO Cairo, Egypt
GATE 5
TIME 3:15 PM
SEAT 16A
PASSENGER NAME
FROM Orlando, FL
TO Cairo, Egypt
DATE TIME
18 APR. 3:15 PM
PLANE TICKET

BOARDING PASS
PASSENGER NAME
FROM Columbus, SC
TO Madrid, Spain
GATE 7
TIME 2:30 PM
SEAT 15B
PASSENGER NAME
FROM Columbus, SC
TO Madrid, Spain
DATE TIME
15 FEB. 2:30 PM
PLANE TICKET

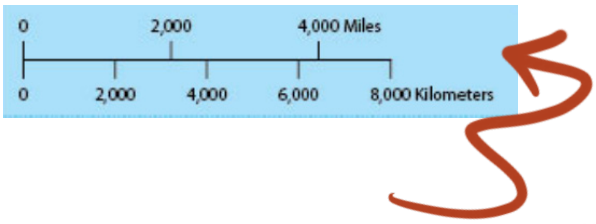
BOARDING PASS
PASSENGER NAME
FROM Seattle, WA
TO Beijing, China
GATE 9
TIME 1:15 PM
SEAT 6C
PASSENGER NAME
FROM Seattle, WA
TO Beijing, China
DATE TIME
5 MAY. 1:15 PM
PLANE TICKET

TASK 2: Scale

Instructions: : Locate the scale (see RED arrow below) on the map. Use this scale to answer the following questions regarding your travel distance between your current location and desired destination.

How does a map scale work?

Map scale refers to the ratio between distance on a map and the consequent distance on the ground (actual distance). Example: 1:100000 scale map, 1cm on the map equals 1km on the ground (actual distance).



Based on your selected board pass

Current Location: _____ Destination: _____

1. Using a ruler, measure how many inches represent 2,000 miles. How many inches? Round to a whole number.

2. Measure how many centimeters represent 2,000 miles. How many centimeters? Round to a whole number.

3. Measure how many inches separate your two drawn points that represent your current location and your destination based on your boarding pass. How many inches? Round to a whole number.

4. Measure how many centimeters separate your two drawn points that represent your current location and your destination based on your boarding pass. How many centimeters? Round to a whole number.

5. Based on the above information, figure out how many miles separate your current location and destination based on your boarding pass.

6. Based on the above information, figure out how many kilometers separate your current location and destination based on your boarding pass.

Work Space

TASK 3: Time Travel

Instructions: A commercial aircraft cruises at about 460-575 miles per hour (mph). Using this information, and your previously gained knowledge about your distance between your current location and destination, figure out about how many hours is your travel time. Round to the nearest hour. Explain your thinking and show your work in your workspace

Work Space

Instructions: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

TASK 4: Establishing Savings

Instructions: Traveling costs money. Often, please work hard to save up the money that they have to be prepared for the costs of a trip. Using counting on and skip counting are two important tools that can help travelers prepare for their trip.

Skip counting is when you repeatedly count by the same number. It connects with the strategy of repeated addition. The most common ways to skip count are by 2's, 5's, and 10's. Let's practice skip counting & repeated addition!

Example: 10 + 10 + 10 + 10 = 40

OR

10 x 4 = 40

2 + 2 + 2 + 2 + 2 + 2 + 2 = _

OR

2 x _ = _

5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 =

OR

_ x _ = _

Example: 5 + 5 + 5 + 5 + 5 = 25

OR

5 x 5 = 25

_ + _ + _ + _ + _ + _ = _

OR

_ x _ = _

_ + _ + _ + _ + _ + _ + _ + _ + _ + _ =

OR

_ x _ =

Instructions: The first part and most important part of preparing for a trip is to save money. Calculate the amount of money saved each month and keep a running total. When applicable, use the strategies from Task 1.

Total for January

_____

Total for Febrary

_____

Total for both months

_____

Total for March

_____

Total for 3 months

_____

Total for April

_____

Total for 4 months

_____

Total for May

_____

Total for 5 months

_____

Total for June

_____

Total for 6 months

_____

Total for July

_____

Total for 7 months

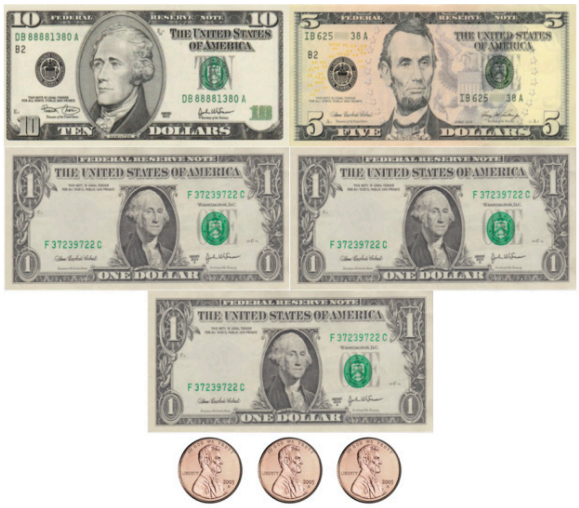
_____

Total for August

_____

Total for 8 months

_____



Total for September

_____

Total for 9 months

_____

Total for October

_____

Total for 10 months

_____

Total for November

_____

Total for 11 months

_____

Total for December

_____

Total for 12 months

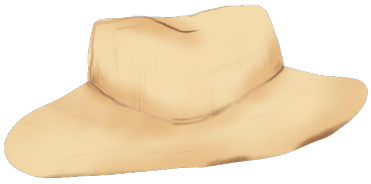
_____

What month had the most amount of money saved? _____

What month had the least amount of money saved? _____

TASK 5: Shopping for Travel

Instructions: The next step to prepare for your trip is to shop for necessary items. Below is a shopping list of items and their prices. Use the chart to complete the task cards.

Sunscreen $8.75	Camera $89.99	Map $7.25
Jacket $29.50	Suitcase $64.50	Headphones $45.75
Hat $16.99 	First Aid Kit $13.00	The Journal $10.65

Cut out the task cards below. Complete them using the chart above. Use the following workspace pages or separate sheets of paper to show your work.

Task #1

Choose two items from the shopping list. Write the names of the items, the cost of each, and then find the total.

Task #2

You have $80 to spend. You want to buy head-phones and a jacket. Do you have enough money? Defend your answer.

Task #3

You have $60 to spend. Find two items that you could buy. How much money would you have left over?

Task #4

Choose four items from the shopping list. Write the names of the items, the cost of each, and then find the total.

Task #5

You buy a hat, a map, and a travel journal at the airport. You pay with a $50 bill. How much is your change?

Task #6

Choose the most expensive item and the least expensive item. Write the names of the items, the cost of each, and then find the difference.

Task #7

You want to buy a new suitcase and first aid kit. You have $75 to spend. Do you have enough money? Defend your answer.

Task #8

You buy three containers of sunscreen. You hand the cashier $30. How much is your change?

Work Space

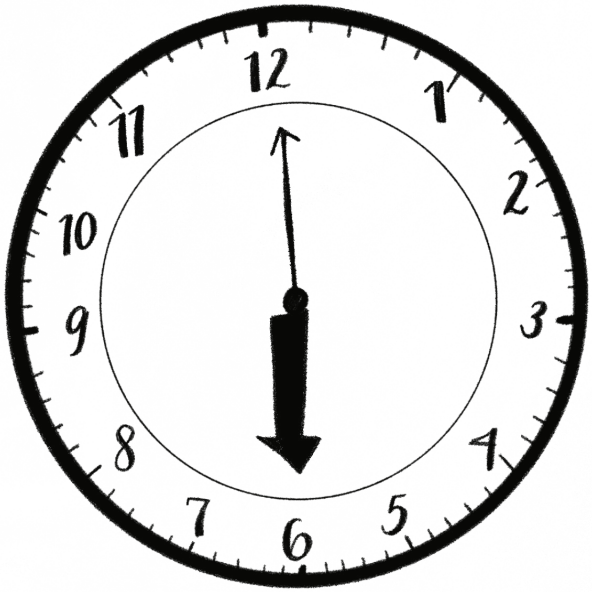
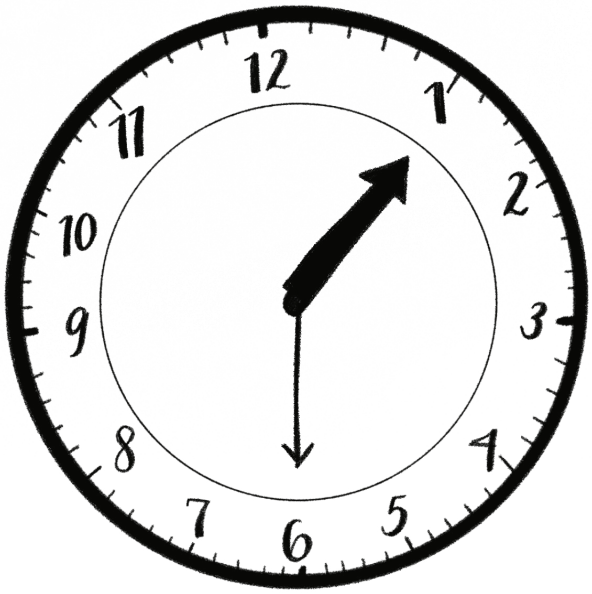
TASK 6: Traveling Takes Time

Instructions: Let's work on your understanding of telling time in preparation for your big trip!

When telling time, begin with the hour hand (shorter hand). Use the numbers 1-12 and use the number that the short hand passed last.

Then, read the minute hand (longer hand). Remember to count the numbers 1-12 by 5's, then count by 1's in between.

Cut out the task cards. Match the times on the digital clocks with the analog clocks.

4:30	
10:00	

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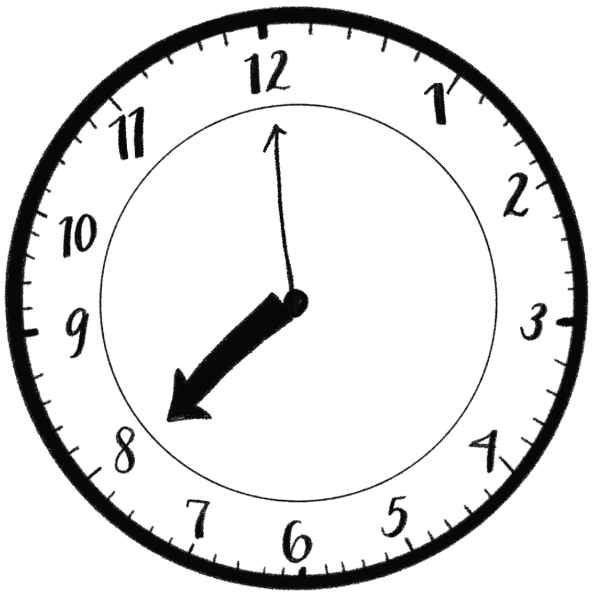

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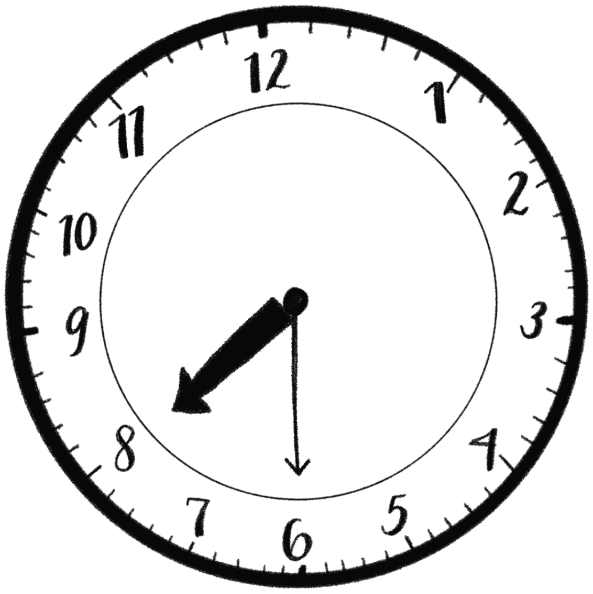

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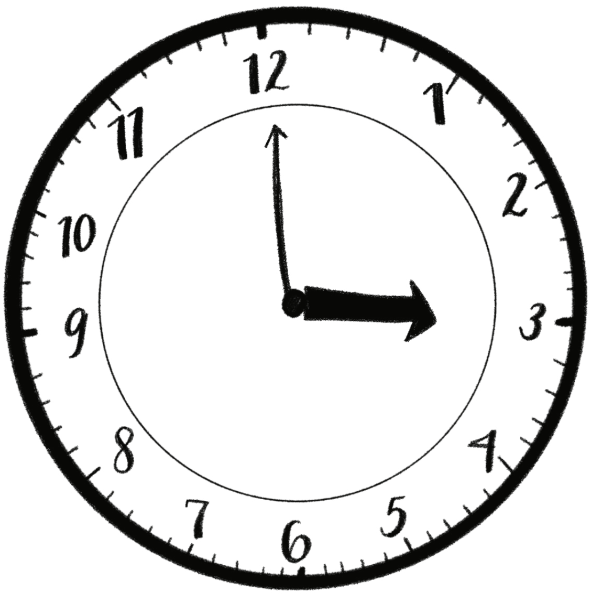

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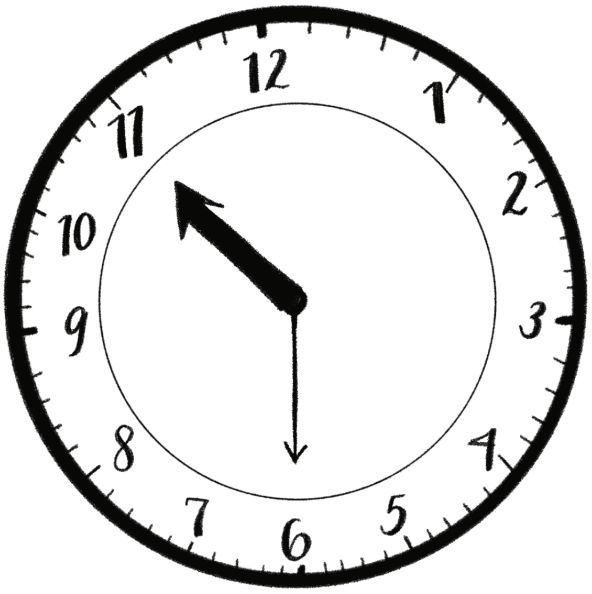
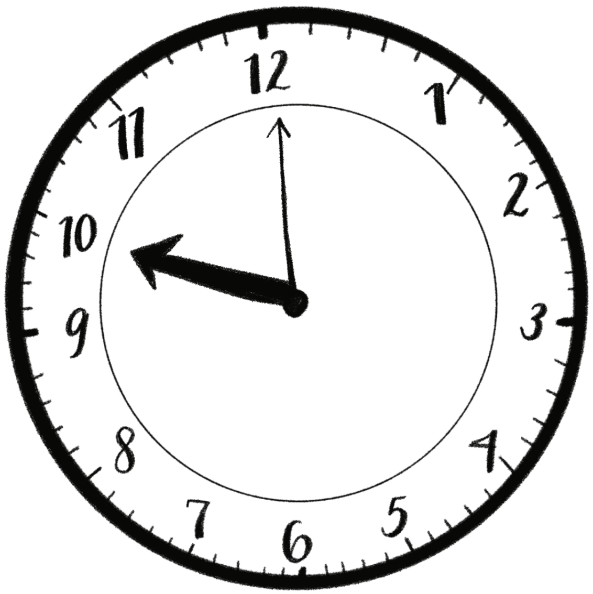
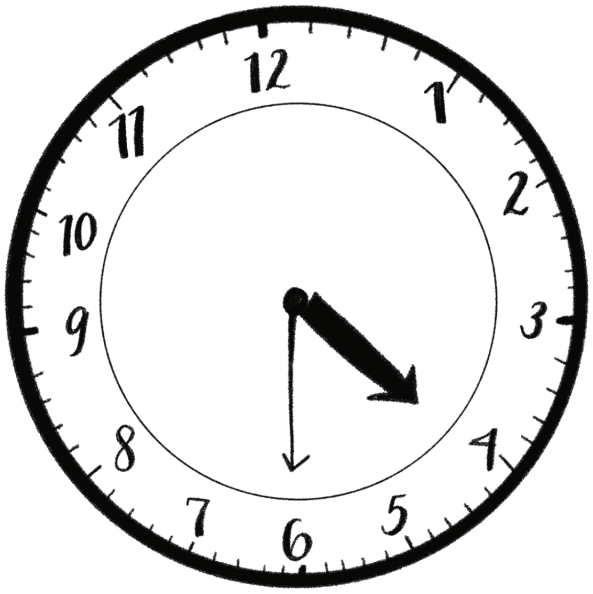


1:30



6:00



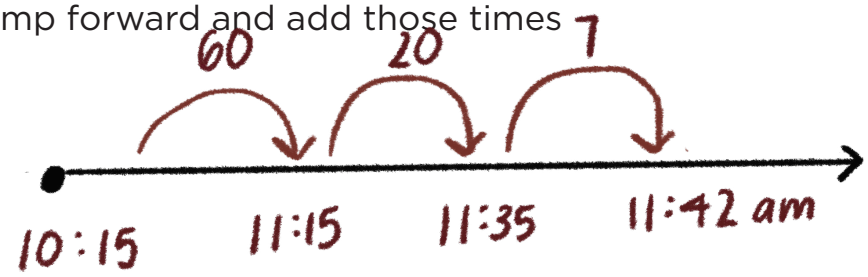
TASK 6: Traveling Takes Time

Instructions: Use the teacher examples in red to practice finding the elapsed time.

Find the End Time

Start Time- 10:15am Elapsed Time- 87 min

*Use the number line to find the end time. Break the minutes into small chunks (60+20+7). Jump forward and add those times



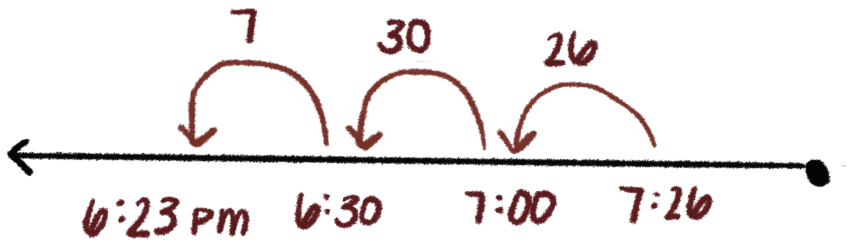
Start Time- 6:40pm Elapsed Time- 53 min

Start Time- 11:18am Elapsed Time- 105 min

Find the Start Time

End Time- 7:26pm Elapsed Time- 63 min

*Use the number line to find the end time. Break the minutes into small chunks (60+20+7). Jump forward and add those times



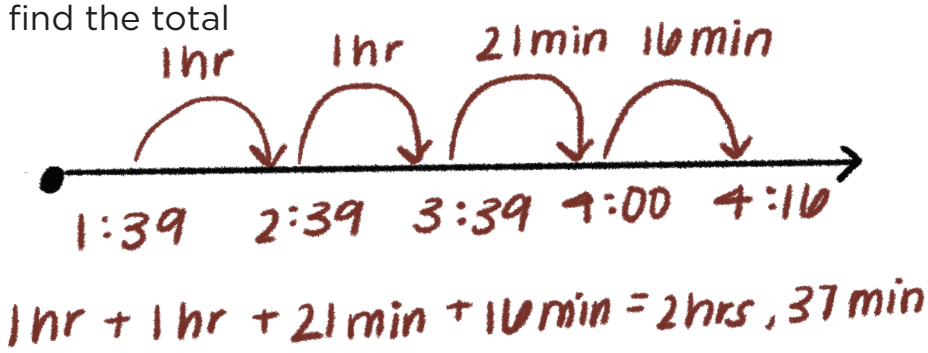
End Time- 8:15am Elapsed Time- 85 min

End Time- 6:30pm Elapsed Time- 113 min

Find the Time Between

Start Time- 1:39pm End Time- 4:16pm

*Use the number line. Jump in chunks to find the amount of time in between. Add the amount to find the total



1hr + 1hr + 21min + 16min = 2hrs, 37min

Start Time- 5:22pm End Time- 9:00pm

Start Time- 4:39am End Time- 7:11am

TASK 7: Itinerary!

Instructions: When traveling, it is important to have a plan (itinerary)! Practice organizing one by filling in the blanks to complete a schedule for your family if you were going on a trip to Rome.

Find the End Time

Activity	Start Time	Duration	End Time
Breakfast at Coro-mandel	8:30am	76 min	
Colosseum Tour		3 hours 15 minutes	2:20pm
Lunch at Armando al Pantheon	2:30pm		3:14pm
Pantheon		90 minutes	
Trevi Foundtain	5:16pm		5:39pm
Dinner at Piccolo Buco	6:03pm	1 hour 49 minutes	
Dessert at ZUM Roma		46 minutes	9:34pm

Instructions: Use the parameters to create an itinerary for your family on a vacation of a destination of your choice.

Parameters:

- The trip should be overseas and last at least 5 days.
- Each day must have a wake-up time and bedtime.
- There should be at least 2 times to eat and 1 activity per day. Remember to include the start time and end time for each.

Use the outline for Day 1 below. Days 2-5 can be organized in your own style.

Day 1

Activity	Time
Wake Up	
Go to Sleep	

Day 2

Activity	Time
Wake Up	
Go to Sleep	

Day 3

Activity	Time
Wake Up	
Go to Sleep	

Day 4

Activity	Time
Wake Up	
Go to Sleep	

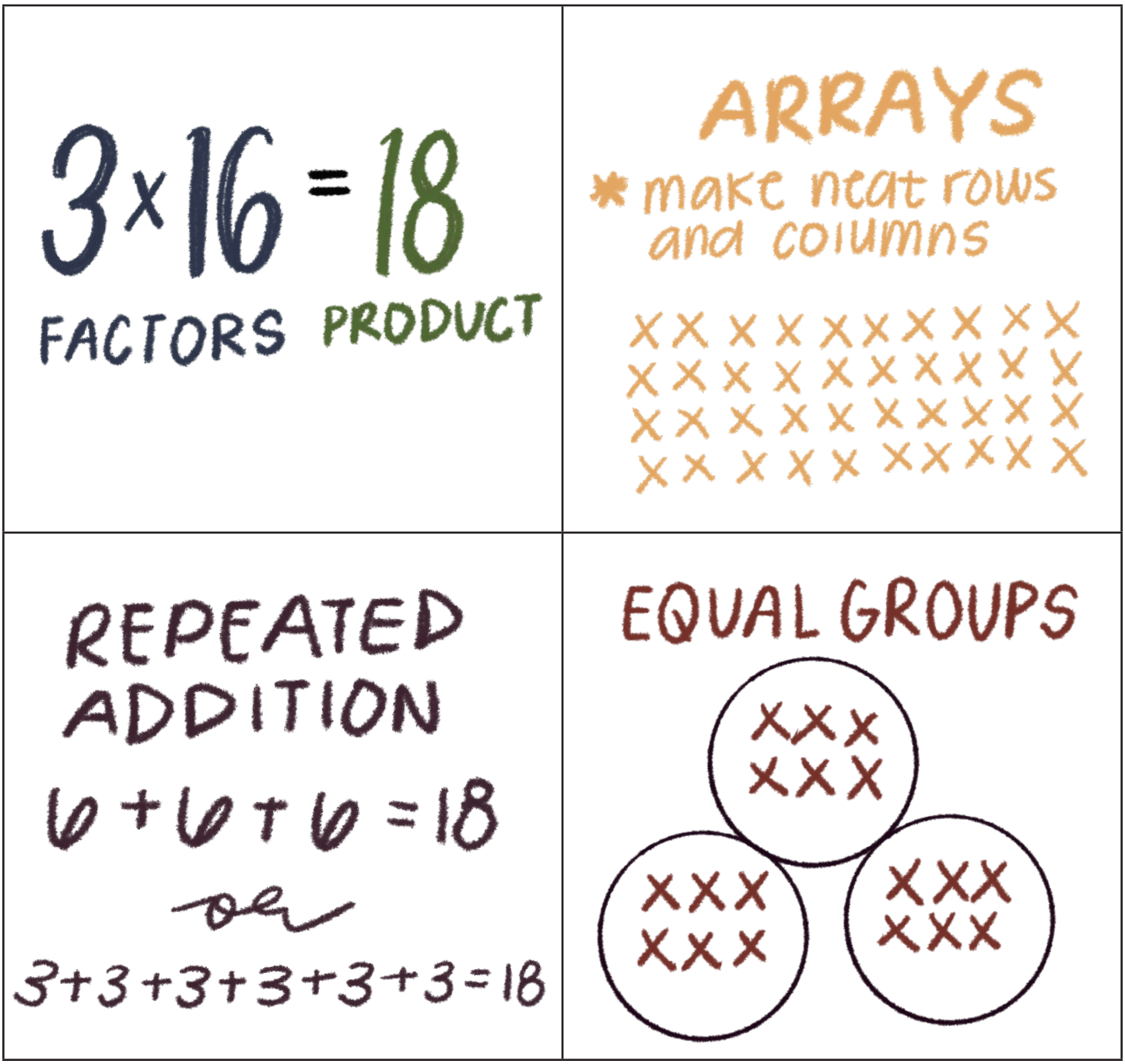
Day 5

Activity	Time
Wake Up	
Go to Sleep	

TASK 8: Fun Trips can MULTIPLY!

Instructions: Multiplication is a faster process of repeatedly adding the same number to itself. Below are three different strategies that can be used to find the answer to a multiplication problem.

The factors are the two numbers that are being multiplied together.
The product is the answer to a multiplication problem.



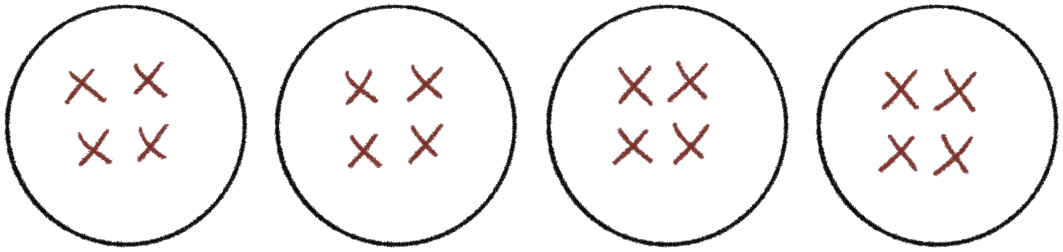
Instructions: Fill in the chart below using the strategies from above.

$5 \times 4 = ___$	ARRAYS * make neat rows and columns
REPEATED ADDITION	EQUAL GROUPS

Instructions: Choose a strategy and write a multiplication sentence to find the total amount of people that would be able to travel in each scenario. Use the teacher example in red for assistance

Scenario 1: 4 cars with 4 people in each

EXAMPLE:



Scenario 2: 8 lines with 6 people in each one

Scenario 3: 6 trucks with 2 people in each

Scenario 4: 8 airplane rows with 3 people in each

Scenario 5: 7 waiting areas with 5 people in each area

Scenario 6: 10 rows in a bus with 4 people in each row

Scenario 7: 1 train with 9 people in each

Scenario 8: 9 taxis with 3 people in each

TASK 9: Shopping for Travel & Bon Voyage!

Instructions: The last step to prepare for your trip is to budget how much your trip will cost. Using the workspace available and money printables below, determine how much money you will be spending in the following five categories: lodging, transportation, food & drinks, entertainment, and souvenirs.

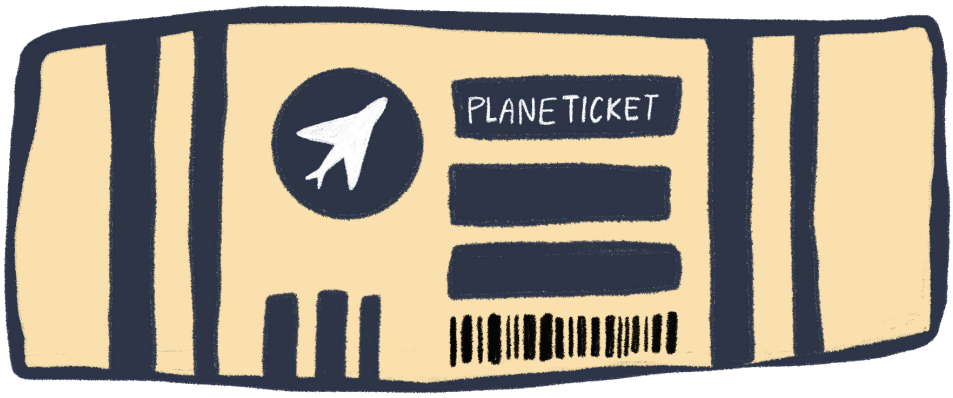
Follow the parameters below to create a successful budget:

- You have a total of $100. You must use the exact amount.
- Souvenirs will use the least amount of money.
- Transportation will use the most amount of money.
- Food & drinks and entertainment each cost less than $17.86.
- Lodging costs at least $23.54.

Write an addition equation using your amounts from each category. Show your work in the space provided and make sure the total is exactly $100.00.

Write the amount of money you budgeted for each item and then draw the amount in dollars and cents.

Food & Drink	Amount Budgeted=	
Lodging	Amount Budgeted=	
Transportation	Amount Budgeted=	
Souvenirs	Amount Budgeted=	
		Total Spent=



Work Space